Work Order ID 97282

February-14-13 1:35:06 PM

97282

Page 1

Item ID:

Revision ID:

Item Name:

D2012-111

Bracket

Start Date: 2/14/13 Required Date: 2/22/13 Start Qty: A.9

QC: _____ Date: ____ SPC (Y/N):

N900040100

Setup Start

NS2

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan: ML5 Date: /3-02-15 Tooling:

Accept

Date:

Date:

Run

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr							· •	
D2012-111	Rev A								
100		0.00		· · · · · · · · · · · · · · · · · · ·					
100	FLOW WATER JET					12	•		Im 2 - 3 - 10
Waterjet	Memo	0.00							JM13-07-10
FLOW CNC Waterjet	1-Cut as per Dwg D2012-111								

304-063

Dwg Rev: A

2-Deburr if necessary

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

Quality Control

Memo

0.00

100

JM13-07-10

120

QC8- Inspect parts - second check

0.00 137.11

Quality Control

120

Memo

NCR: Y	es .	/ No				WORK ORDER NON-C	O	NFORM	MANCE / UPDATE		·		
						·					QA Closed:	Date	:
Work Orde	ar.					DISPOSITION			AC	GAINST DEF	PARTMENT	PROCESS	
Work Orac						Rework	ı		Skid-tube Cro	sstube		Water Jet	Engineering
Part N	lo.					Scrap			i— l	nall Fab	Pro	d. Eng. Coor.	Quality
	-					Use-as-is		Thern	noforming Fi	nishing	Rec/Stor	e/Packaging	Other
NCR N	۱o. <u> </u>					Work Order Update			Large Fab Con	nposite		Supplier	
Root					Descri	ption of work order update	ı	nitial	Action		Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Description	1	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling													
Operator													
Material		:											
Setup													
Other													
Process													
Supplier													
Training													
Unapproved			<u> </u>										
							AUL	T CATE	GORY				
Landi	ng Ge	ear				General						_	_
	E	Bending				Bend	<u></u>	Grain		<u> </u>	Ovalized		Pressure/Forced
:	Щ	Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re	<u></u>	Over/Under	tolerance	Temperature/Cure
	-	Cracks				Broken/Damaged	<u> </u>	Inspect	ion Incomplete		Part Incorre	ct	Weld
	Щ°	Crushed/	Crimped.			Burrs	L	Instruct	ions Incomplete/Unclea	r	Part Lost/M	issing	Wrong Stock Pulled
	\Box	Cuffs				Contamination		Mainte	enance		Part Moved		
	١	leat Trea	t			Countersink		Mislabe	eled		Positioned V	Vrong	
		nspection	n Strip in	Tube		Cut Too Short		Misread	t d		Power Loss/	Surge	Other
	F	Ripples in	Bend			Drill Holes		Offset					

Out of Calibration

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

February-14-13 1:35:06 PM Item ID: D2012-111 Accept *N900040100* Setup Start *NS1* **Revision ID:** Item Name: Bracket Start Qty: 4.00 Start Date: 2/14/13 **Cust Item ID:** Required Date: 2/22/13 **Req'd Qty:** 4.00 **Customer:** Reference: Run Process Plan: Date: Tooling: Approvals: Date: Stop QC: _____ Date: ____ SPC (Y/N): Date: Sequence ID/ Operation Tool ID Set Up/ Tool # Plan Reject Accept Reject Insp. Work Center ID Description **Run Hours** Code Qty Qty Number Stamp 130 0.00 Small Fab *130* Small Fab Memo Small Fab Deburr if necessary. 140 QC5- Inspect part completeness to step of W/O 0.00 *140* QC 0.00 Memo Quality Control Identify as per dwg & Stock Location 150 *150* Packaging 0.00 Memo Packaging

NCR: Yes / No

DQA: _____ Date: ____

NCR: Y	es / No				WORK ORDER NON-C	CONFOR	MANCE / UP	PDATE		_	
									QA Closed:	Date	:
Work Orde	r:				DISPOSITION			AGAINST DE	PARTMENT	PROCESS	
WOIK Older	'· 				Rework	7	Skid-tube	Crosstube	Water Jet Engineerin		
Part N	0.				Scrap	1 1	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					Use-as-is	The	rmoforming	Finishing		re/Packaging	Other
NCR N	o				Work Order Update]	Large Fab	Composite		Supplier	
		T	,			1		4	C: 0		
Root		. .]		ption of work order update	Initial	1	ction	Sign &	Verification	QC Inspector
Cause	Date	Step	Qty		or Non-conformance	Chief En	g Desc	cription	Date	vermeation	QC IIIspector
Doc/Data	_										
Equip/Tooling	_										
Operator	_										
Material	_										
Setup	_	ļ									
Other			1. 1								
Process Supplier											
Training											
Unapproved		1									
					F	AULT CAT	EGORY				
Landin	ng Gear				General				_		
	Bending				Bend	Grain	1		Ovalized		Pressure/Forced
	Centre N	ot Conce	ntric to O)/s	BOM/Route	Hard	vare		Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged	Inspe	ction Incomplete		Part Incorre	ct _	Weld
	Crushed/	Crimped	-		Burrs	Instru	ctions Incomplete	/Unclear	Part Lost/M	issing	Wrong Stock Pulled
ſ	Cuffs				Contamination	Mair	tenance		Part Moved		
ſ	Heat Trea	at			Countersink	Misla	beled		Positioned \	Wrong _	_
Ī	Inspectio	n Strip in	Tube		Cut Too Short	Misre	ad		Power Loss,	/Surge	Other
	Ripples in	n Bend			Drill Holes	Offse	t				
Ī	Torque V	Vaves in I	Extrusion		Drawing	Out	f Calibration				
Ī	Turning S	Sequence	:		Finish	Out	f Sequence				
	Wave/Tv	vist in Tul	be		Folio	Outs	de Dimensions				

97282

Page 3

February-14-13 1:35:06 PM

Item ID:

D2012-111

Accept

N900040100

Setup Start

Revision ID:

Start Date:

Item Name:

Bracket 2/14/13

Start Qty: 4.00

Req'd Qty: 4.00

Cust Item ID:

Customer:

Reference:

Approvals:

Required Date: 2/22/13

Process Plan: Date:

Date:

Tooling:

SPC (Y/N):

Date: Date: Run

Sequence ID/ Work Center ID Operation Description

QC21- Final Inspection - Work Order Release

Set Up/ **Run Hours** Tool ID

Tool # Plan Accept Code Qty

Reject Qty

Reject Number Stamp

Insp.

160

Memo

0.00

0.00

pl 13.01-1

Quality Control

160

		DQA: Date:
ICR: Yes / No	WORK ORDER NON-CONFORMANCE / UPDATE	

											QA Closed:	Date:	
Work Orde	or.		· · ·			DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
WORK Orac	- ' -				· · · · · · · · · · · · · · · · · · ·	Rework	1 		Skid-tube	Crosstube]	Water Jet	Engineering
Part N	ฟก					Scrap		1	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
, , , ,	•••	 				Use-as-is	1 1		noforming	Finishing	3	re/Packaging	Other
NCR N	No.					Work Order Update	1 1		Large Fab	Composite		Supplier	
	•		<u>-</u> .							· ·			
Root					Descri	ption of work order update	1	nitial	Ad	tion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Desc	cription	Date	Verification	QC inspector
Doc/Data													
Equip/Tooling]										
Operator											į		
Material													
Setup													
Other													
Process				·									
Supplier													
Training									1				
Unapproved											<u> </u>		
						F.	AUL	T CATE	GORY	*****			
Landi	_	1				General	_	ı		_	7	_	- 1
	-	Bending			-	Bend	-	Grain			Ovalized	ļ	Pressure/Forced
	L	Centre No	ot Conce	ntric to	o/s	BOM/Route	-	Hardwa		<u></u>	Over/Under)	Temperature/Cure
		Cracks				Broken/Damaged	\vdash	•	ion Incomplete		Part Incorre	<u> </u>	Weld
	_	Crushed/	Crimped		_	Burrs	-		tions Incomplete	/Unclear	Part Lost/M	issing	Wrong Stock Pulled
	 -	Cuffs				Contamination		Mainte			Part Moved		
	$ldsymbol{ld}}}}}}$	Heat Trea	at			Countersink		Mislabe	eled		Positioned \		
	-	Inspectio		Tube		Cut Too Short	<u> </u>	Misrea	d		Power Loss,	/Surge	Other
		Ripples ir				Drill Holes	-	Offset					
	<u>_</u>	Torque W	aves in l	Extrusio	n L	Drawing		ł	Calibration				
	l	Turning S	equence		- 1	Finish		Out of	Sequence				

Outside Dimensions

Wave/Twist in Tube

Folio

Picklist Print

February-14-13 10:55:45 AM

Work Order ID:

97282

Parent Item:

Comments:

D2012-111

Parent Item Name:

Bracket

IPP: C00.05.02Now laser cutEC

Start Date: 2/14/13

Required Date: 2/22/13

Start Qty: 4.00

Required Qty: 4.00

	IPP D 07.01.24	waterjet	EC										
Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S16GA 304/316 Sheet .063		Purchased	No			100	sf	589.7560	0.0215	0.0905264	5.RS		-F <u>0-8m</u>
				Location		Loc Qty	<u>Lo</u>	c Code					
				MAT020		589.756							
			-	122	245	5.156							
				123	136	140.9							
				124	428	123.7			-				
				124	572	320			125	5192			

			DQA:	Date:	
		<u>.</u>			
ICR.	Ves / No	WORK ORDER NON-CONFORMANCE / UPDATE			

											QA Closed:	Da	ite:	
Work Orde	or.			•		DISPOSITION				AGAINST DE	PARTMENT	PROCESS		
Part N	•	<u>.</u>				Rework Scrap			Skid-tube Machining	Crosstube Small Fab	Pro	Water Jet d. Eng. Coor.	-	Engineering Quality
raiti	NO .					Use-as-is	┪ ┃ ,		noforming	Finishing	4	e/Packaging	-	Other
NCR N	۷o.					Work Order Update	-		Large Fab	Composite	1100/3101	Supplier	\vdash	
	•					· L_	-		·					
Root			1		Descri	iption of work order update	Ini	tial	Ac	tion	Sign &			
Cause		Date	Step	Qty		or Non-conformance	Chie	f Eng	Desc	cription	Date	Verification	on	QC Inspector
Doc/Data							İ							
Equip/Tooling													ł	
Operator							İ						Ì	
Material													1	
Setup			1				1							
Other				l										
Process													1	
Supplier														
Training							1							
Unapproved									<u> </u>			<u> </u>	Į	
						F	AULT	CATE	GORY					
Landi	ng (Gear				General					7			
		Bending			L	Bend	ШG	rain			Ovalized		\perp	Pressure/Forced
		Centre N	ot Conce	ntric to	o/s	BOM/Route	Шн	ardwa	ire		Over/Under			Temperature/Cure
		Cracks			L	Broken/Damaged	Llir	spect	ion Incomplete	L	Part Incorre	ct	\vdash	Weld
		Crushed/	Crimped	÷		Burrs	L Ir	struct	ions Incomplete,	/Unclear	Part Lost/M	issing		Wrong Stock Pulled
		Cuffs				Contamination	∿	1ainte	enance		Part Moved			
		Heat Trea	at			Countersink	\square^{\triangleright}	1islabe	eled		Positioned \	=		ı
		Inspectio	n Strip in	Tube		Cut Too Short	Ш∾	1isrea	t		Power Loss	/Surge		Other
		Ripples ir	n Bend			Drill Holes		ffset						
		Torque V	Vaves in I	Extrusio	n [Drawing		ut of	Calibration					
}		Turning S	Sequence	?		Finish		ut of	Sequence					
		Wave/Tw	vist in Tu	be		Folio		utside	Dimensions					

DART AEROSPACE LTD	Work Order:	97787
Description: Bracket	Part Number:	D2012-111
Inspection Dwg: D2012-111 Rev: A		Page 1 of 1

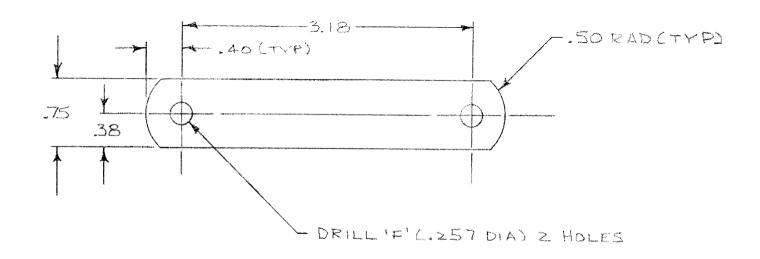
FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

			-		<i>,</i> ,	
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.257	+0.006/-0.001	0258)		U	Tomos
3.18	+/-0.030	3.180"	_		V	
0.75	+/-0.030	D.756"	-		U	
0.38	+/-0.030	0.388	-			
0.40	+/-0.030	0.3984	_		Ü	
				_		

,			<u></u>			
	Measured by:	Ym	Audited by:	20	Prototype Approval:	N/A
	Date:	13.07-10	Date:	13-7-11	Date:	N/A

Rev	Date	Change	Revised by	Approved
Α	07.02.09	New Issue	KJ/JLM ,	
В	08.07.03	Inspection Dwg and Rev correction	KJ/DD	77



c . · .

NOTES: 1. MAT'L AIST 304/316 CRES

	A	REVISION			RIVET CODE SHAL	L BE PER NAS 523	PART NO.	ITEM	DESC	RIPTION	MATERIAL	SPEC./VENDOR
	44	DRAWN .	THIS DRAWING IS PRIVATE AND CONFEDENTIAL AN IT IS NOT TO BE USED FOR MAY PURPOSE OR CON WITHOUT THE PERMISSION OF DART AERO.	DIA DASH NO. BASIC CODE HINGAO NEAR SIDE FYHEAD FAR SIDE				Т		DART AERO ACCESSORIES INC.		
	95	APPROVED							DART DART AERO ACCI		CANADA	
	4. 24		REQUIREMENTS - UNLES	SS OTHERWISE SPECIFIED	D-DIMPLE	LENGTH DASH NO	HATTON	ON ON	3 1 L			· - 1_1
	6 6	DESCRIPTION	CÉNERU.	trait?	DIGITENO OF SHEETS	Westernwein	DESIGN	<u> </u>	24.34.24			
	X 3	OF.	1. DRAINSONS ARE NI BICHES 1 TOKERANCES JOX ± 030 SUBSCE ROUGHISS (1974) SALNOY SHAPE FOODS (3.05 MAX 2 ANGLES ± 16" PREADS PER NEW 5 : 774 2 3 PARALLICISM ± 2025 HOLES PER AND 10382 4 CECENTRISECTY OF SALKS	BASIC CODES		BRADLE	7 99/	3/3/1	TEE.			
I	5 11	CHANGE			04351052M+88		"		- 1		BRACKET	
	17. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10			5 SYMMETHY ABOUT ALE MYC CENTRE LIMES ,005			CHECKED BRANCH -	917	6/3 60	KX DAM	DZOIZ -	111 1
	2 6		REPORT	ALL DISCREPANCIES - DO NO	T SCALE		(tan:			sc.	u Siri	7 or / 1